

**PATENT**

Atty Docket No.: 200308991-1  
App. Ser. No.: 10/826,288

**REMARKS**

Favorable reconsideration of this application is respectfully requested in view of amendments above and the following remarks. By virtue of the amendments above, claims 1, 2, 5, 8, 11-16, and 18 have been amended. Support for the amendments may be found in the original specification at paragraphs 12, 14 and 20. Claims 19-42 were previously cancelled. New claim 43 has been added. Accordingly, claims 1-18 and 43 are pending in the present application, of which claims 1 and 43 are independent.

Claims 1-8, 11-15, and 18 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 6,503,831 to Speakman ("Speakman") in view of U.S. Patent No. 5,235,187 to Arney et al. ("Arney") and U.S. Patent Publication No. 2004/0123651 to Hantschel et al. ("Hantschel").

Claims 9-10 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Speakman, in view of Arney and Hantschel, as applied by the Examiner to claims 1-8, 11-15, and 18, further in view of U.S. Patent No. 6,617,657 to Yao et al. ("Yao").

Claim 16 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Speakman, in view of Arney and Hantschel, as applied by the Examiner to claims 1-8, 11-15, and 18, further in view of U.S. Patent No. 6,587,408 to Jacobson et al. ("Jacobson").

**Status of Claims 19-36 and 41-42**

The indication that claims 19-36 and 41-42 are withdrawn is incorrect. In the Response to Restriction Requirement filed on October 31, 2005, claims 19-36 and 41-42 were cancelled without prejudice or disclaimer. Thus, an appropriate change/update in the

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USPTO records to reflect the cancelled status of claims 19-36 and 41-42 is respectfully requested.

**Drawings**

The indication that the drawings submitted on April 19, 2004 have been approved is noted with appreciation.

**Allowable Subject Matter**

The indication that claim 17 is objected to as being dependent upon a rejected base claim, but that these claims would be allowable if rewritten in independent form is also noted with appreciation.

**Claim Objections**

Claim 16 has been objected to because it is unclear as to whether the term "at least one contact probe" refers to a previously recited contact probe or an additional one. Claim 16 has been amended to recite "the at least one contact probe and the AFM tip each being one of the contact probes affixed to the device." Thus, the withdrawal of the foregoing objection is respectfully requested.

**Claim Rejections Under 35 U.S.C. §103(a)**

The test for determining if a claim is rendered obvious by one or more references for purposes of a rejection under 35 U.S.C. § 103 is set forth in *KSR International Co. v. Teleflex Inc.*, 550 U.S. \_\_\_, 82 USPQ2d 1385 (2007):

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"Under §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented." Quoting *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966).

As set forth in MPEP 2143.03, to ascertain the differences between the prior art and the claims at issue, "[a]ll claim limitations must be considered" because "all words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385. According to the Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in view of *KSR International Co. v. Teleflex Inc.*, Federal Register, Vol. 72, No. 195, 57526, 57529 (October 10, 2007), once the *Graham* factual inquiries are resolved, there must be a determination of whether the claimed invention would have been obvious to one of ordinary skill in the art based on any one of the following proper rationales:

(A) Combining prior art elements according to known methods to yield predictable results; (B) Simple substitution of one known element for another to obtain predictable results; (C) Use of known technique to improve similar devices (methods, or products) in the same way; (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results; (E) "Obvious to try"—choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success; (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art; (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention. *KSR International Co. v. Teleflex Inc.*, 550 U.S. \_\_\_, 82 USPQ2d 1385 (2007).

Furthermore, as set forth in *KSR International Co. v. Teleflex Inc.*, quoting from *In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006), "[R]ejections on obviousness grounds cannot be

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sustained by mere conclusory statements; instead, there must be some articulated reasonings with some rational underpinning to support the legal conclusion of obviousness."

Therefore, if the above-identified criteria and rationales are not met, then the cited reference(s) fails to render obvious the claimed invention and, thus, the claimed invention is distinguishable over the cited reference(s).

**Claims 1-8, 11-15, and 18**

Claims 1-8, 11-15, and 18 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Speakman in view of Arney and Hantschel. Amended claim 1 recites a method of making a microelectromechanical system device comprising coating a micromover component with a first film after releasing the micromover component, the first film being configured to store data, and affixing contact probes to the device after coating the micromover component, the contact probes being configured to read the stored data.

As conceded in the Office Action at page 3, Speakman fails to teach or suggest coating a micromover component with a first film after releasing the micromover component and affixing contact probes to the device after coating the micromover component, the contact probes being configured to read stored data. The Office Action at page 3 states that, in Fig. 20 of Speakman, Speakman teaches a micromover component 1302 and coating the micromover component 1302 with a first film. In Fig. 20, the element 1302 is a cantilever and a piezoelectric thin film 1300 is used to oscillate the cantilever 1302, where "[s]uch structure could be used to fire liquid droplets from a nozzle, motion of the cantilever acting to force droplets from the nozzle." Speakman at column 44, lines 22-30. However, Speakman fails to teach or suggest that the cantilever 1302 is coated with the piezoelectric thin film

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1300 after releasing the cantilever 1302. Further, Speakman fails to teach that contact probes are attached to the cantilever 1302 for reading stored data. Instead, Speakman teaches that the cantilever 1302 is used to fire liquid droplets from a nozzle.

The Office Action at page 4 relies on Arney as teaching coating a micromover after releasing the micromover. Specifically, the Office Action at page 3 states that, in reference to Figs. 1 and 1A of Arney, Arney discloses coating a piezoelectric film on a cantilever beam 24 and further states that after "the removal of the oxide (release of the beam) the beam is coated." The Office Action cites column 12, lines 16-20, column 17, lines 35-45 and 65-68, of Arney for providing a support for the quoted statement.

However, the cited portions of Arney's disclosure fail to teach or suggest that, in reference to Figs. 1 and 1A of Arney, the piezoelectric film on the cantilever beam 24 is coated after releasing the cantilever beam 24. Rather, the cited portions of Arney's disclosure teaches that tips 12 and 22 and electrical contacts on the cantilever beam 24 may be formed after releasing of the cantilever beam 24. Thus, the foregoing teaching by Arney that tips 12 and 22 and electrical contacts on the cantilever beam 24 may be formed after releasing of the cantilever beam 24 does not teach or suggest that the piezoelectric film on the cantilever beam 24 is coated after releasing the cantilever beam 24. Similarly, the foregoing teaching by Arney that, in reference to Figs. 1 and 1A of Arney, tips 12 and 22 and electrical contacts on the cantilever beam 24 may be formed after releasing of the cantilever beam 24 does not teach or suggest that the piezoelectric thin film 1300 in Fig. 20 of Speakman may be formed after releasing of the cantilever 1302 in Fig. 20 of Speakman.

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Thus, for at least the above discussed reasons, Arney fails to teach or suggest that the cantilever 1302 in Fig. 20 of Speakman may be coated by the piezoelectric thin film 1300 after releasing the cantilever 1302.

Further, Arney fails to teach or suggest having contact probes for reading stored data in the liquid-droplet firing device in Fig. 20 of Speakman, which comprises the cantilever 1302 and the piezoelectric thin film 1300 used to oscillate the cantilever 1302, where the combined structure is used to fire liquid droplets from a nozzle with the motion of the cantilever acting to force droplets from the nozzle. For instance, Speakman is silent as to having any data reading capacity in the liquid-droplet firing device in Fig. 20 of Speakman. Since there is no apparent need for having contact probes for reading stored data in the liquid-droplet firing device in Fig. 20 of Speakman, Speakman teaches away from having such features. Thus, Arney fails to teach or suggest having contact probes for reading stored data in the liquid-droplet firing device in Fig. 20 of Speakman in view of Speakman's teaching away from having such features.

Hantschel fails to teach or suggest a way to overcome the above discussed deficiencies of Speakman and Arney for at least the following reasons.

Hantschel fails to teach or suggest coating a micromover component with a first film after releasing the micromover component, and affixing contact probes to the device after coating the micromover component, the contact probes being configured to read stored data. In reference to Figs. 17-18 of Hantschel, Hantschel teaches a probe assembly having a spring probe (125-17 and 125-18, respectively) with a tip (1735 and 1835, respectively). However, Hantschel fails to teach or suggest coating a micromover component with a first film after releasing the micromover component.

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The Office Action at page 4 relies on Hantschel to show attaching tips after or before releasing a micromover. However, as discussed above, since Speakman teaches away from having contact probes for reading stored data in the liquid-droplet firing device in Fig. 20 of Speakman, it would not have been obvious to a person of ordinary skill in the art to have contact probes for reading stored data in the liquid-droplet firing device in Fig. 20 of Speakman.

For at least the foregoing reasons, the proposed combination of Speakman, Arney and Hantschel fails to teach or suggest all of features of independent claim 1 and its dependent claims.

With respect to dependent claims 1-8, 11-15, and 18, each claim recites additional features that are not taught or suggested by the proposed combination of Speakman, Arney and Hantschel. In particular, claim 2 recites that the step of coating comprises selectively depositing a coating composition on a surface of the micromover component without going over an edge of the surface by using a difference in surface tension over the edge, and claim 4 recites that a first film is configured to store data as indentations of the first film. Such features are not taught or suggested in the above discussed prior art references.

**Claims 9-10**

Claims 9-10 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Speakman, in view of Arney and Hantschel, as applied by the Examiner to claims 1-8, 11-15, and 18, further in view of Yao.

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Claims 9-10 variously depend from independent claim 1 and for at least the reasons set forth earlier with respect to claim 1, the proposed combination of Speakman, Arney, Hantschel, and Yao fails to teach or suggest all of features of claims 9-10.

**Claim 16**

Claim 16 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Speakman, in view of Arney and Hantschel, as applied by the Examiner to claims 1-8, 11-15, and 18, further in view of Jacobson.

Claim 16 depends from independent claim 1 and for at least the reasons set forth earlier with respect to claim 1, the proposed combination of Speakman, Arney, Hantschel, and Jacobson fails to teach or suggest all of features of claims 16.

Accordingly, it is respectfully submitted that a *prima facie* case of obviousness has not been established under 35 U.S.C. § 103 with respect to claims 1-16 and 18. Accordingly, the Examiner is respectfully requested to withdraw the rejection of claims 1-16 and 18 and to allow these claims.

**New Claim**

Newly added claim 43 recites features similar to those discussed above for claim 1. Thus, for at least the same reasons set forth earlier with respect to claim 1, the proposed combinations of the above discussed prior art references fail to teach or suggest all of features of claim 43.



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Accordingly, withdrawal of this rejection and allowance of the claims is respectfully requested.

**Conclusion**

In light of the foregoing, withdrawal of the rejections of record and allowance of this application are earnestly solicited.

Should the Examiner believe that a telephone conference with the undersigned would assist in resolving any issues pertaining to the allowability of the above-identified application, please contact the undersigned at the telephone number listed below. Please grant any required extensions of time and charge any fees due in connection with this request to deposit account no. 08-2025.

Respectfully submitted,

Dated: June 18, 2008

By



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